

**REMARKS**

Claims 1-52 were previously pending in this application. Claims 1, 2, 34 and 47 have been amended. Claims 1-52 remain pending for examination with claims 1, 34, 41 and 47 being independent claims. No new matter has been added.

**Claim Objections**

Claims 1, 2 and 47 have been objected to for containing minor informalities.

Claim 1 recited a radiation-recording plate, but failed to identify the type of exposure incident on the plate. Claim 1 has been amended to recite “a radiation-recording plate constructed and arranged to have a capacity to form an image of an object upon exposure to radiation impinging on the object and then incident upon the plate from a front side and to have a capacity to form an image of the object upon exposure to radiation impinging on the object and then incident upon the plate from a back side.” Claim 1 has been further amended to clarify the markers included in the plate. The claim now recites, “the plate including prior to exposure a marker that produces a mark detectable in the image after exposure to radiation incident upon the plate from only one of the front side and the back side without constraint as to which, and indicative of both from which of the front side and the back side the plate is exposed to the radiation and indicative of any mirroring transformations performed upon an image recovered from the plate after exposure to the radiation.

Claim 2 was objected to for reciting “the radiation,” for which the Examiner did not find antecedent basis. Claim 2 has been rewritten to recite “a medium opaque to the radiation impinging on the object and then incident upon the plate, and the marker covering a region.” Because the amended phrase has antecedent basis in the language of amended claim 1, this claim is now in proper form.

Claim 47 was objected to for substantially the same reason as claim 2. Claim 47 has been rewritten to recite “a data structure defined by a record in the recording medium of an image produced by exposure to radiation of a radiation sensitive medium.” A minor typographical error in line 5 has also been corrected, by deleting a semi-colon. Claim 47 is now in proper form.

Withdrawal of the Examiner’s objections, in view of the corrections made, is now respectfully requested.

Rejections Under 35 U.S.C. §102

Claims 1, 2, 9-15, 18-20 and 34-52 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,123,040 to Fabian (hereinafter "*Fabian*"). Claims 1 and 34 have been amended, overcoming this rejection, and the rejection is traversed as to claims 41 and 47. The balance of the rejected claims are each dependent from one of the foregoing claims and therefore allowable for at least the same reasons, as explained below.

*Fabian* discloses an X-ray cassette and a marked X-ray film that identifies the exposure side of a medical radiograph. The X-ray film and the cassette are keyed to fit together in a defined way, and the cassette also includes X-ray intensifying screens, one disposed adjacent each surface of an inserted sheet of X-ray film.

The cassette of *Fabian* is keyed, so that the sheet of film can only be inserted in the cassette in one orientation. The film of *Fabian* has a marker printed thereon or otherwise applied that indicates which surface of the film is the front, relative to the cassette. Other markers can be conventionally printed on or otherwise applied to the film, for example by exposure through a suitable mask when an image is made on the film.

The cassette and film of *Fabian* must be used in cooperation with each other. Without the physically orienting features of the cassette, the film of *Fabian* can be exposed to radiation from either side. Even with the physically orienting features of the cassette, the film of *Fabian* can still be exposed to radiation from either side, if the cassette itself is not oriented in the expected direction to the source of exposure radiation by the user or by other physical keys through which the cassette cooperates with a mounting structure. Yet, there is no way to determine from the image produced, from which side the film has *actually* been exposed to the radiation. Indeed, the intensifying screens convert X-ray radiation into light radiation that does expose the film from both sides during conventional imaging, along with the X-ray radiation that excites the intensifying screens. If the cassette and/or film of *Fabian* were mis-oriented, so that radiation first impinging on the object to be imaged then impinged on the film *from the back*, rather than from the front as is usual, there is nothing in the structure disclosed to mark the film so as to indicate from which side that radiation impinged.

In contrast, the present invention, for example as claimed in claim 1, includes:

prior to exposure a marker that produces a mark detectable in the image after exposure to radiation incident upon the plate from only one of the front side and the back side without constraint as to which, and indicative of both from which of the front side and the back side the plate is exposed to the radiation and indicative of any mirroring transformations performed upon an image recovered from the plate after exposure to the radiation.

That is, the marker is present in the radiation-sensitive plate before exposure, and the marker produces a mark in the recorded image that indicates from which side the exposing radiation is incident upon the plate after first being incident upon the object to be imaged. For example, if the plate is used to image biological tissue by passing X-ray radiation through the tissue and then onto the plate, the orientation of the plate to the X-ray radiation source is indicated by the mark produced. It is not the orientation of the plate to any secondary radiation, such as that produced by an intensifying screen, but the orientation of the plate to the primary, X-ray radiation, in this example.

The structure disclosed by *Fabian* does not anticipate the present invention, as claimed in claim 1, because it does not include a marker that produces the described and claimed mark indicative of the orientation of the film to the radiation that first impinged on the object to be imaged and then impinged on the film.

Claim 34 has been amended to include similar language to that discussed above in connection with claim 1.

Claim 47 recites “a mark embedded in the data structure, the mark produced during the exposure of the radiation-sensitive medium, and the mark both indicative of which side the radiation-sensitive medium was exposed from and indicative of any mirroring transformations performed upon the image in whose record the mark is embedded,” which cannot be any mark disclosed by *Fabian* because exposing the film of *Fabian* from the back side does not change the mark produced in the image on the film, whereas this language requires that the mark produced by exposing from the back be distinguishable from that produced by exposing from the front. Furthermore, claim 47 requires both a radiation sensitive medium and a recording medium to which an image formed on the radiation sensitive medium is transferred. *Fabian* does not disclose these features, or any features related to these, in any way.

Claim 41 is directed to a method of making a radiation-sensitive plate and recites “applying a suspension of a heavy metal in a binder to a region of a second side of the radiation sensitive layer; providing a detectable marker on the first side; and wherein the detectable marker

and the suspension of a heavy metal applied combined are distinct and asymmetric,” thus describing a method of making a plate including a marker that produces a mark that differs depending on the side of the plate from which radiation impinges.

Claims 37, 41 and 47 are not anticipated for the reasons given.

Claims 2, 9-15, 18-20 and 35-40, 42-46 and 48-52 are each ultimately dependent on one of the independent claims discussed above, and so are not anticipated for at least the same reasons as discussed above in connection with the independent claim from which each, respectively, depends.

Accordingly, withdrawal of this rejection is respectfully requested.

#### Rejections Under 35 U.S.C. §103

Claims 3-8, 16, 17 and 21-33 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Fabian*. These rejections are traversed, as discussed below.

Claims 3-8, 16, 17 and 21-23 are dependent claims, allowable at least for the same reasons as the independent claims, claim 1, from which they depend. Claim 1 is not anticipated by *Fabian*, as explained above. Moreover, it is not taught or suggested thereby because there is no teaching or suggestion to include in the plate a marker that produces a mark indicative of from which side radiation which impinges on an object to be imaged then impinges on the plate.


Accordingly, withdrawal of this rejection is respectfully requested.

#### CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, which is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,  
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Date: February 23, 2006